This listing of claims will replace all prior versions, and listings of claims in the application.

In the Claims:

1. (withdrawn) A method for detecting an isolate of a *B. cereus* group, in a sample, the method comprising:

(a) placing on a microchip oligonucleotide probes targeted to rRNA sequences wherein at least one mismatch is sufficient to discriminate among the *B. cereus* subgroups;

(b) providing conditions for hybridization of the probes with rRNA from the sample; and

(c) analyzing hybridization signals in the microchip from which the particular isolate is detected.

2. (withdrawn) The method of claim 1, wherein the oligonucleotide probes are directed to 16S rRNA and 23S rRNA and the corresponding target sequences are shown in FIG. 1 and FIG. 2.

3. (withdrawn) The method of claim 1, wherein the probes are labeled.

4. (withdrawn) The method of claim 3, wherein the labels are selected from the group consisting of fluorescent dyes, radio isotopes, immunological labels, immuno-chemical labels and gold particles.

5. (withdrawn) The method of claim 1, wherein the oligonucleotide probes selected from the group consisting of sequences listed in Table 5 discriminate subgroups Anthracis, Cereus A, Cereus B, Thuringiensis A, Thuringiensis B, Mycoides A and Mycoides B.

6. (withdrawn) The method of claim 1, wherein pairs of oligonucleotide probes that discriminate subgroups *Anthracis* from *Cereus A* are ps21/ps22, ps23/ps24, 23F13/23F14, 23F15/23F16, and C9/C10.

7. (withdrawn) The method of claim 1, wherein a ratio of hybridization signals of oligonucleotide probes ps17 and ps18 discriminates between *B. anthracis* Ames and *B. cereus* 9620.

8. (withdrawn) The method of claim 1, wherein the oligonucleotide probes are ps21, ps22, ps23, and ps24 to discriminate *B. anthracis* Sterne from *B. cereus* HER 1414 and *B. thuringenesis* B8.

9. (withdrawn) The method of claim 1, wherein the oligonucleotide probes are ps7, ps8, and ps9 to discriminate *B. thuringenesis* 4Q281 from other *B. cereus* subgroup isolates.

10. (previously presented) A microarray that comprises oligonucleotide probes selected from the group consisting of sequences designated:

Oligonucleotide Name	5' to 3' Sequence
ps5	CCG CTA ACT TC**A** T**A**A GAG CA (SEQ ID NO: 74)
ps6	CCG CTA ACT TC**t** T**g**A GAG CA (SEQ ID NO: 75)
ps17	TCT AGG GTT **G**TC AGA GGA TG (SEQ ID NO: 86)
ps18	TCT AGG GTT **t**TC AGA GGA TG (SEQ ID NO: 87)
ps19	TCT GC**T** CCC GAA GG**A** GAA GC (SEQ ID NO: 88)
ps20	TCT GC**c** CCC GAA GG**g** GAA GC (SEQ ID NO: 89)
ps21	CAG CTC AGC CTT **C**AC GAT AA (SEQ ID NO: 90)
ps22	CAG CTC AGC CTT **t**AC GAT AA (SEQ ID NO: 91)
23F1	TTT GGG CTA TGT TCC GTT TC (SEQ ID NO: 126) and
23F2	TTT GGG CTA GAT TCC GTT TC (SEQ ID NO: 127)

11. (currently amended) The microarray of claim 10, wherein the oligonucleotides are arranged in a specific pattern wherein I, II, III and IV are columns and A, B, C, D, E, and F are rows <u>in the microarray</u> ~~in the microchip~~:

	I	*II*	*III*	*IV*
A	ps19	ps20		
B				
C			ps5	ps6
D				
E				
F			ps17	ps18

12. (previously presented) A microarray as in claim 10, wherein the oligonucleotides are arranged in pairs: ps19 and ps20; ps5 and ps6; ps17 and ps18.

13. (canceled).

14. (canceled).

15. (canceled).

16. (previously presented) A probe selected from the group consisting of sequences designated:

Oligonucleotide Name	5' to 3' Sequence
ps5	CCG CTA ACT TC**A** TAA GAG CA (SEQ ID NO: 74)
ps6	CCG CTA ACT TC**t** T**g**A GAG CA (SEQ ID NO: 75)
ps17	TCT AGG GTT **G**TC AGA GGA TG (SEQ ID NO: 86)
ps18	TCT AGG GTT **t**TC AGA GGA TG (SEQ ID NO: 87)
ps19	TCT GC**T** CCC GAA GG**A** GAA GC (SEQ ID NO: 88)
ps20	TCT GC**c** CCC GAA GG**g** GAA GC (SEQ ID NO: 89)
ps21	CAG CTC AGC CTT **C**AC GAT AA (SEQ ID NO: 90)
ps22	CAG CTC AGC CTT **t**AC GAT AA (SEQ ID NO: 91)
	TTT GGG CTA TGT TCC GTT TC (SEQ ID NO: 126) and
	TTT GGG CTA GAT TCC GTT TC (SEQ ID NO: 127).

17. (currently amended) The probe of claim 16, wherein the sequence of the oligonucleotide probe is ~~reversed~~ the full reverse complement of a sequence of claim 16 .

18. (canceled).

19. (canceled).

20. (currently amended) A diagnostic kit to detect *B. anthracis* target rRNA in a sample, the diagnostic kit comprising:

(a) a microchip that comprises at least one oligonucleotide probe that distinguishes *B. anthracis* from other closely related microorganisms, wherein the oligonucleotide is selected from the group consisting of

CCG CTA ACT TC**A** TAA GAG CA (SEQ ID NO: 74),
CCG CTA ACT TC**t** T**g**A GAG CA (SEQ ID NO: 75),
TCT AGG GTT GTC AGA GGA TG (SEQ ID NO: 86),
TCT AGG GTT tTC AGA GGA TG (SEQ ID NO: 87),
TCT GCT CCC GAA GGA GAA GC (SEQ ID NO: 88),
TCT GCc CCC GAA GGg GAA GC (SEQ ID NO: 89),
CAG CTC AGC CTT CAC GAT AA (SEQ ID NO: 90),
CAG CTC AGC CTT tAC GAT AA (SEQ ID NO: 91),

TTT GGG CTA TGT TCC GTT TC (SEQ ID NO: 126),
TTT GGG CTA GAT TCC GTT TC (SEQ ID NO: 127); and

(b) a method for detecting hybridization between the at least one probe and the target rRNA by which hybridization, *B. anthracis* is detected.

21. (withdrawn) A method for taxonomically classifying *B. cereus* groups, said method comprising:

(a) developing strain- and subgroup-specific signature profiles of 16S and 23S rRNA sequences for *B. cereus* group isolates; and

(b) using the signature profiles to construct phylogenetic trees in order to classify the various *B. cereus* group isolates.

22. (canceled).